

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-17 (Canceled)

18. (Currently Amended) A method for applying a soil biocide formulation to soil comprising:

creating a biocide formulation containing
an emulsifier, and
an effective amount of a soil biocide selected from the group consisting of
methyl bromide, chloropicrin, ~~1,3-dichloropropene~~, and methylisothiocyanate;
creating a soil treatment mixture by adding said biocide formulation to an
aqueous medium; and
applying said soil treatment mixture to the soil.

19. (Previously Presented) The method as recited in claim 18, wherein said soil biocide is present in a range of approximately 50 to 99% by weight of the biocide formulation; and said emulsifier is present in a range of approximately 50 to 1% by weight of the biocide formulation.

20. (Original) The method as recited in claim 18, wherein said emulsifier is comprised of non-ionic and anionic surfactants.

21. (Previously Presented) The method as recited in claim 18, wherein said soil biocide is present in said biocide formulation in the range of approximately 80 to 95% by weight; and said emulsifier is present in said biocide formulation in the range of approximately 20 to 5% by weight.

22. (Previously Presented) The method as recited in claim 18, wherein said soil biocide is present in said biocide formulation in the preferred range of approximately 90-95% by weight; and said emulsifier is present in said biocide formulation in the range of approximately 5-10% by weight.

23. (Previously Presented) The method as recited in claim 20, wherein said anionic surfactant is present in said emulsifier in the range of approximately 0.1 to 40% by weight.

24. (Original) The method as recited in claim 20, wherein the anionic surfactant is selected from the group consisting of Isopropyl amine Dodecyl Benzene Sulfonate, Dodecyl Benzene Sulfonate, and Sodium Dodecyl Benzene Sulfonate.

25. (Original) The method as recited in claim 20, wherein the non-ionic surfactant is selected from the group consisting of Tridecyl Ethoxylate, Castor Oil Ethoxylate, nonylphenol ethoxylate, Octyl phenol ethoxylate and Isoheptyl Ethoxylate.

26. (Original) The method as recited in claim 20, wherein said non-ionic surfactant is present in said emulsifier in the range of approximately 70 to 100% by weight of the emulsifier.

27. (Canceled)

28. (Previously Presented) The method as recited in claim 18, wherein said soil biocide comprises chloropicrin having an application rate of approximately 100-300 lbs per acre.

29. (Previously Presented) The method as recited in claim 18, wherein said soil biocide comprises methylisothiocyanate having an application rate of approximately 7-100 lbs. per acre.

30. (Previously Presented) The method as recited in claim 18, wherein said soil biocide comprises methyl bromide having an application rate of approximately 150-400 lbs. per acre.

31. (Canceled)

32. (Previously Presented) A method for fumigating soil, said method comprising the steps of:

- creating a biocide formulation containing
- an anionic surfactant,
- a non-ionic surfactant, and
- an effective amount of a soil biocide selected from the group consisting of methyl bromide, chloropicrin, 1-3 dichloropropene, and methylisothiocyanate;
- creating a soil treatment mixture by adding said biocide formulation to an aqueous medium; and,
- applying said soil treatment mixture to the soil in a drip irrigation system.

33. (Previously Presented) A method for fumigating soil as recited in claim 32 wherein said drip irrigation system comprises components made of plastic.

34. (Previously Presented) The method as recited in claim 18, wherein said soil treatment mixture is applied to the soil through a system comprising plastic components.

35. (Currently Amended) A method for applying a soil biocide formulation to soil comprising:

- creating a biocide formulation including
- an anionic surfactant,
- a non-ionic surfactant, and
- an effective amount of a soil biocide selected from the group consisting of methyl bromide, chloropicrin, ~~1-3 dichloropropene~~, and methylisothiocyanate;

creating a soil treatment mixture by adding said biocide formulation to an aqueous medium; and
applying said soil treatment mixture to the soil.

36. (Previously Presented) The method as recited in claim 35, wherein said anionic surfactant comprises isopropyl amine dodecyl benzene sulfonate, and said non-ionic surfactant comprises castor oil ethoxylate and nonylphenol ethoxylate.

37. (Previously Presented) The method as recited in claim 36, wherein said biocide formulation further comprises isopropyl alcohol.

38. (New) A method for applying a soil biocide formulation to soil comprising:
creating a biocide formulation containing
nonylphenol ethoxylate in an amount from approximately 50 to 90%,
castor oil ethoxylate in an amount from approximately 10 to 40%,
isopropyl amine dodecyl benzene sulfonate in an amount from approximately 0.1 to 10%,
isopropyl alcohol in an amount from approximately 0.1 to 30%, and
an effective amount of a soil biocide selected from the group consisting of
methyl bromide, chloropicrin, 1-3 dichloropropene, and methylothiocyanate;
creating a soil treatment mixture by adding said biocide formulation to an
aqueous medium; and
applying said soil treatment mixture to the soil.

39. (New) A method for applying a soil biocide formulation to soil comprising:
creating a biocide formulation consisting essentially of
an emulsifier, and
an effective amount of a soil biocide selected from the group consisting of
methyl bromide, chloropicrin, 1-3 dichloropropene, and methylothiocyanate;
creating a soil treatment mixture by adding said biocide formulation to an
aqueous medium; and
applying said soil treatment mixture to the soil.

40. (New) The method as recited in claim 39 wherein said treatment mixture is applied to the soil in a drip irrigation system.

41. (New) The method as recited in claim 40 wherein said drip irrigation system comprises plastic components.